

DFNWB2*2-6L-A Plastic-Encapsulate MOSFETS

CJMPD08 P-Channel Power MOSFET

General Description

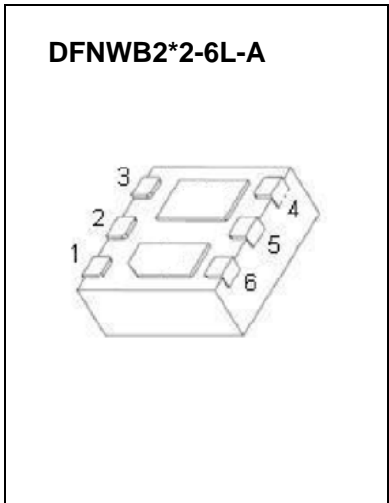
The CJMPD08 uses advanced trench technology and design to provide excellent $R_{DS(on)}$ with low gate charge. This device is suitable for use in DC-DC conversion applications.

FEATURE

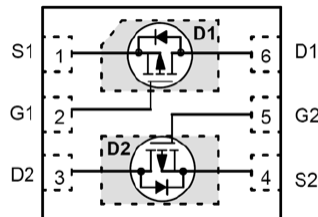
- Low Profile for Easy Fit in Thin Environments
- Bidirectional Current Flow with Common Source Configuration

APPLICATIONS

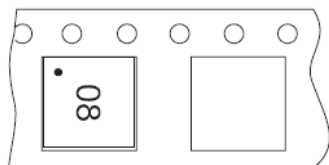
- Optimized for Battery and Load Management Applications in Portable Equipment
- Li-Ion Battery Charging and Protection Circuits
- High Power Management in Portable, Battery Powered Products
- High Side Load Switch



MARKING:



Tape Drawing (Unit : mm)



Maximum ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	± 8	
Continuous Drain Current(Note1a)	I_D	-3.6	A
Power Dissipation (Note1a)	P_D	1.4	W
Power Dissipation (Note1b)	P_D	0.7	W
Thermal Resistance from Junction to Ambient (Note1a)	$R_{\theta JA}$	86	$^{\circ}\text{C/W}$

Thermal Resistance from Junction to Ambient (Note1b)	$R_{\theta JA}$	173	$^{\circ}C/W$
Thermal Resistance from Junction to Ambient (Note1c)	$R_{\theta JA}$	69	$^{\circ}C/W$
Thermal Resistance from Junction to Ambient(Note1d)	$R_{\theta JA}$	151	$^{\circ}C/W$
Junction Temperature	T_j	150	$^{\circ}C$
Storage Temperature	T_{stg}	-55 ~+150	

Notes:1. $R_{\theta JA}$ is determined with the device mounted on a 1.5 x 1.5 in. PCB of FR-4 material.

(a) when mounted on a 1 in² pad of 2 oz copper, 1.5 " x 1.5 " x 0.062 " thick PCB. For single operation.

(b) when mounted on a minimum pad of 2 oz copper. For single operation.

(c) when mounted on a 1 in² pad of 2 oz copper, 1.5 " x 1.5 " x 0.062 " thick PCB. For dual operation.

(d) when mounted on a minimum pad of 2 oz copper. For dual operation.

Electrical characteristics ($T_a=25^{\circ}C$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
On/Off Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-20			V
Gate-threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.4		-1	
Gate-body leakage current	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 8V$			± 100	nA
Zero gate voltage drain current	I_{DSS}	$V_{DS} = -16V, V_{GS} = 0V$			-1	μA
Drain-source on-state resistance (Note 2)	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -3.6A$			60	m Ω
		$V_{GS} = -2.5V, I_D = -3A$			80	
		$V_{GS} = -1.8V, I_D = -2A$			110	
		$V_{GS} = -1.5V, I_D = -1A$			170	
Forward transconductance (Note 2)	g_{fs}	$V_{DS} = -10V, I_D = -2.7A$	5.5			S
Charges , Capacitances and Gate resistance(Note3)						
Input capacitance	C_{iss}	$V_{DS} = -15V, V_{GS} = 0V, f = 1MHz$		480		pF
Output capacitance	C_{oss}			46		
Reverse transfer capacitance	C_{rss}			10		
Total gate charge	Q_g	$V_{DS} = -4.5V, V_{GS} = -6V, I_D = -2.8A$		7.2		nC
Gate-source charge	Q_{gs}			2.2		
Gate-drain charge	Q_{gd}			1.2		
Switching times (Note3)						
Turn-on delay time	$t_{d(on)}$	$V_{DS} = -6V, I_D = -2.8A,$ $V_{GS} = -4.5V, R_G = 6\Omega$		38		ns
Rise time	t_r			25		
Turn-off delay time	$t_{d(off)}$			43		
Fall time	t_f			5		
Source-drain diode characteristics						
Forward on voltage (Note2)	V_{SD}	$V_{GS} = 0V, I_S = -1A$			-0.8	V

Notes:

2. Pulse Test : Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
3. These parameters have no way to verify.

